

1 15A NCAC 02D .2701 is proposed for adoption as follows:  
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3 **SECTION .2700 – STANDARDS OF PERFORMANCE FOR EXISTING ELECTRIC UTILITY GENERATING**  
4 **UNITS UNDER CLEAN AIR ACT SECTION 111(d)**

5 **15A NCAC 02D .2701 PURPOSE AND APPLICABILITY**

6 (a) Purpose. The purpose of this Section is to implement the provision(s) in Clean Air Act Section 111(d) for Best  
7 System of Emission Reduction for Existing Electric Generating Units to reduce the emissions of carbon dioxide through  
8 heat rate improvement.

9 (b) Applicability. This Section applies to the following, that are fossil fuel-fired steam electric utility generating units  
10 (EGUs) to the extent they are subject to regulation in 40 CFR Part 60.5845 that:

11 (1) Serve a generator connected to a utility power distribution system with a nameplate capacity of 25  
12 MW-net or greater and capable of selling greater than 25 MW of electricity;

13 (2) Have a base load rating or design heat input capacity greater than 250 MMBtu/hr or greater heat input  
14 of fossil fuel either alone or in combination with any other fuel; and

15 (3) Are stationary combustion turbines that meet the definition of either a natural gas combined cycle or  
16 combined heat and power combustion turbine.

17 (c) Excluded units. This Section does not apply to the fossil fuel-fired steam EGUs that are excluded under 40 CFR Part  
18 60.5850.

19 (d) Retired unit exemption. Any unit that is permanently retired shall be exempted from this Section as of its retirement  
20 date.

21 (e) Effect on other authorities. No provision of this Section, any application submitted or any permit issued pursuant to  
22 15A NCAC 02D .2704 of this Section shall be construed as exempting any unit or source covered under this Section or  
23 the owner or operator from complying with any other requirements of this Subchapter or Subchapter 15A NCAC 02Q.

24 (f) In the event all or any portion of 40 CFR 60 Subpart UUUU containing the guidelines is:

25 (1) Declared or adjudged to be invalid or unconstitutional or stayed by the United States Court of Appeals  
26 for the Fourth Circuit, by the District of Columbia Circuit, or by the United States Supreme Court; or

27 (2) Withdrawn, repealed, revoked or otherwise rendered of no force and effect by the United States  
28 Environmental Protection Agency, Congress, or Presidential Executive Order.

29 Such action shall render the regulation as incorporated herein, or that portion thereof that may be affected by such action,  
30 as invalid, void, stayed, or otherwise without force and effect for purposes of this rule upon the date such action becomes  
31 final and effective; provided, further, that such declaration, adjudication, stay, or other action described herein shall not  
32 affect the remaining portions, if any, of the regulation as incorporated herein, which shall remain of full force and effect  
33 as if such portion so declared or adjudged invalid or unconstitutional or stayed or otherwise invalidated or effected were  
34 not originally a part of this rule. The Environmental Management Commission declares that it would not have  
35 incorporated the remaining parts of the federal regulation if it had known that such portion thereof would be declared or  
36 adjudged invalid or unconstitutional or stayed or otherwise rendered of no force and effect.

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1 History Note: Authority G.S. 143-215.3(a); 143-215.107(a)(5), (10);  
2 Amended Eff. September 1, 2016.  
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1 15A NCAC 02D .2702 is proposed for adoption as follows:

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3 **15A NCAC 02D .2702 DEFINITIONS**

4 For the purpose of this Section, the following definitions apply.

5 (1) "Affected electric generating unit (EGU)" means a fossil fuel fired steam generating unit that:

6 (A) serves a generator connected to a utility power distribution system with a nameplate capacity  
7 of 25 MW-net or greater and capable of selling greater than 25 MW of electricity;

8 (B) has a base load rating or design heat input capacity greater than 250 MMBtu/hr or greater heat  
9 input of fossil fuel either alone or in combination with any other fuel;

10 (C) is a stationary combustion turbine that meets the definition of either a natural gas combined  
11 cycle or combined heat and power combustion turbine; and

12 (D) includes, and shall not extend beyond, the following systems: fuel combustion system,  
13 combustion air system, steam system, draft system, turbine system, air pollution control  
14 system, cooling system, and auxiliary equipment contained within the facility that uses  
15 electrical power.

16 (2) "Air heater leakage reduction (ALR)" means to reduce air leakage between the combustion air and the  
17 exhaust gas of Lungstrom, or rotary air heaters by removal of existing air preheater seals and replacing  
18 them with newer high performance seals.

19 (3) "Best system of emission reduction (BSER)" means a design, equipment, work practice, or operational  
20 standard, or combination thereof, which reflects the best technological system of continuous emission  
21 reduction taking into consideration the cost of achieving such reduction, and any non-air quality health  
22 and environmental impact and energy requirements.

23 (4) "Combustion optimization with neural network (CO)" means a system that conducts real-time  
24 monitoring and controls fuel and air flow distribution, furnace exhaust gas temperatures, and boiler  
25 steam temperatures to maximize heat recovery and minimize carbon monoxide emissions and nitrogen  
26 oxides emissions. CO systems are based on nonlinear, multivariable steady-state models derived from  
27 historical unit operating data that identify the best combination of independent operating variables that  
28 produce optimum combustion and thermal efficiency with low emissions.

29 (5) "Condenser rebundle, retube, rebuild (CRR)" means to replace, repair or reconfigure tube elements,  
30 tube sheets, the condenser shell and other condenser components in order to correct leaks, plugging  
31 and debris build up to increase effective heat transfer surface area, or to otherwise improve heat  
32 transfer and fluid flow in the condenser. CRR results in greater and more consistent condenser  
33 vacuum under the range of boiler operating conditions and available cooling water temperatures.

34 (6) "Controllable loss reduction (CLR)" means developing and implementing a site-specific plan for best  
35 operations and maintenance practices (O&M) to maintain performance. CLR involves a  
36 comprehensive effort to collect information that may not be readily collected through existing sensors  
37 and data collection systems, interpret all data collected, and make decisions regarding actions to be

1 taken to improve or maintain performance. CLR consists of implementing a plan and instructing staff  
2 in the value and practice of collecting and reporting information regarding the ongoing performance of  
3 all the pieces of equipment comprising the power plant and implementing changes to operating or  
4 maintenance practices that are determined to improve heat rate.

5 (7) “Forced draft fan variable frequency drive (FDF)” means equipment used to reduce fan power  
6 consumption by electronically controlling combustion air flowrate. FDF utilizes a silicon controlled  
7 rectifier or equivalent device to control electrical frequency and voltage to the fan motor, thereby  
8 matching fan speed and combustion air flowrate with operating load.

9 (8) “Heat input” from fuel is determined by multiplying the higher heating value of the fuel times the  
10 amount of fuel consumed over that time.

11 (9) “Heat rate” means the amount of fuel thermal energy or heat input in million Btu (MMBtu) used by an  
12 electrical generator or power plant to generate one kilowatt-hour (kWh) of electricity. For this rule,  
13 heat input is expressed in units of Btu heat input per net kWh generated.

14 (10) “Induced draft fan or booster fan variable frequency drive (IBD)” means equipment used to reduce fan  
15 power consumption by electronically controlling exhaust gas flowrate. IBD utilizes a silicon  
16 controlled rectifier or an equivalent device to control electrical frequency and voltage to the fan motor,  
17 thereby matching fan speed and exhaust gas flowrate with operating load.

18 (11) “Intelligent soot blowing (ISB)” means the use of software, instrumentation, sensors, and automated  
19 controls to achieve more effective cleaning of furnace wall and convective section heat transfer  
20 surfaces. The ISB system may consist of devices for monitoring furnace exhaust gas temperatures,  
21 steam temperatures, and furnace wall temperatures at different locations, a control system, and furnace  
22 cleaning devices. The ISB’s control system digitally processes the received information to evaluate  
23 the effects of real-time heat transfer performance in order to allocate high pressure steam or high  
24 pressure air to cleaning devices in specified heat transfer zones. The ISB activates furnace cleaning  
25 devices (also known as “soot blowers”) when measurement sensors indicate the need to remove ash or  
26 slag deposits from the furnace location where it is most effective to do so, resulting in improved boiler  
27 efficiency as well as reduced energy demand from soot blower and furnace cleaning systems.

28 (12) “Nameplate capacity” means nameplate capacity as defined in 40 CFR 60.5880.

29 (13) “Natural gas” means natural gas as defined in 40 CFR 60.5880.

30 (14) “Natural gas combined cycle (NGCC)” means an electric generating unit that uses a stationary  
31 combustion turbine firing natural gas from which the heat from the combustion turbine exhaust gas is  
32 recovered by a heat recovery steam generating unit to generate additional electricity.

33 (15) “Net generation” means net-electric output as defined in 40 CFR 60.5880.

34 (16) “Steam generating unit” means any furnace, boiler or other device used for combusting fossil fuel and  
35 producing steam plus any integrated equipment that provides electricity or useful thermal energy  
36 output to the affected unit or auxiliary equipment.

1           (17) “Variable speed drives” means a system to increase and decrease the operating speed of fluid moving  
2           equipment such as fans or pumps by reducing the drives’ rotational speed in revolutions per minute to  
3           meet required changes in fluid flow rates.

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5           *History Note: Authority G.S. 143-215.3(a); 143-215.107(a)(5), (10);*

6           *Amended Eff. September 1, 2016.*

1 15A NCAC 02D .2703 is proposed for adoption as follows:

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3 **15A NCAC 02D .2703 STANDARDS OF PERFORMANCE REQUIREMENTS FOR CARBON DIOXIDE**

4 (a) This Section applies to affected electric generating units (EGUs) listed below. The owner or operator shall apply the

5 following heat rate improvement measures, identified as Best System of Emission Reduction (BSER) measures for

6 carbon dioxide emissions at the affected EGU or an alternative BSER approved pursuant to Paragraph (e) of this Rule at

7 the affected EGU.

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<b><u>Affected Units - Coal-fired EGUs</u></b>		
<b><u>Utility Company - Facility</u></b>	<b><u>Unit ID</u></b>	<b><u>Best System of Emission Reduction Measure(s)</u></b>
<u>Duke Energy - Asheville</u>	<u>1</u>	<u>none</u>
<u>Duke Energy - Asheville</u>	<u>2</u>	<u>none</u>
<u>Duke Energy - Belews Creek</u>	<u>1</u>	<u>CLR and FDF</u>
<u>Duke Energy - Belews Creek</u>	<u>2</u>	<u>CLR and FDF</u>
<u>Duke Energy - Cliffside</u>	<u>5</u>	<u>none</u>
<u>Duke Energy - Cliffside</u>	<u>6</u>	<u>ALR, CO, FDF, and ISB</u>
<u>Duke Energy - G G Allen</u>	<u>1</u>	<u>none</u>
<u>Duke Energy - G G Allen</u>	<u>2</u>	<u>none</u>
<u>Duke Energy - G G Allen</u>	<u>3</u>	<u>none</u>
<u>Duke Energy - G G Allen</u>	<u>4</u>	<u>none</u>
<u>Duke Energy - G G Allen</u>	<u>5</u>	<u>none</u>
<u>Duke Energy - Marshall</u>	<u>1</u>	<u>ISB</u>
<u>Duke Energy - Marshall</u>	<u>2</u>	<u>ISB</u>
<u>Duke Energy - Marshall</u>	<u>3</u>	<u>ALR, CO, FDF and ISB</u>
<u>Duke Energy - Marshall</u>	<u>4</u>	<u>ALR, CO, FDF and ISB</u>
<u>Duke Energy - Mayo</u>	<u>1A &amp; 1B</u>	<u>none</u>
<u>Duke Energy - Roxboro</u>	<u>1</u>	<u>none</u>
<u>Duke Energy - Roxboro</u>	<u>2</u>	<u>FDF, IBD and ISB</u>
<u>Duke Energy - Roxboro</u>	<u>3A &amp; 3B</u>	<u>ISB</u>
<u>Duke Energy - Roxboro</u>	<u>4A &amp; 4B</u>	<u>ISB</u>
<u>Edgecombe Genco - Battleboro</u>	<u>1</u>	<u>none</u>
<u>Edgecombe Genco - Battleboro</u>	<u>2</u>	<u>none</u>
<u>Westmoreland Partners - Roanoke Valley Energy Facility I</u>	<u>1</u>	<u>none</u>
<u>Westmoreland Partners - Roanoke Valley Energy Facility II</u>	<u>1</u>	<u>none</u>

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<b><u>Affected Units -Natural Gas Combined Cycle EGUs</u></b>		
<b><u>Utility Company - Facility</u></b>	<b><u>Unit ID</u></b>	<b><u>Best System of Emission Reduction Measure(s)</u></b>
<u>Dominion Resources - Rosemary</u>	<u>GEN1</u>	<u>NGCC operation firing natural gas</u>
<u>Dominion Resources - Rosemary</u>	<u>GEN2</u>	
<u>Dominion Resources - Rosemary</u>	<u>GEN3</u>	
<u>Duke Energy - Buck</u>	<u>CT11</u>	
<u>Duke Energy - Buck</u>	<u>CT12</u>	
<u>Duke Energy - Buck</u>	<u>ST10</u>	
<u>Duke Energy - Dan River</u>	<u>CT8</u>	
<u>Duke Energy - Dan River</u>	<u>CT9</u>	
<u>Duke Energy - Dan River</u>	<u>ST7</u>	
<u>Duke Energy - H F Lee</u>	<u>1A</u>	
<u>Duke Energy - H F Lee</u>	<u>1B</u>	
<u>Duke Energy - H F Lee</u>	<u>1C</u>	
<u>Duke Energy - H F Lee</u>	<u>ST1</u>	
<u>Duke Energy - L V Sutton</u>	<u>1A</u>	
<u>Duke Energy - L V Sutton</u>	<u>1B</u>	
<u>Duke Energy - L V Sutton</u>	<u>ST1</u>	
<u>Duke Energy - Sherwood H Smith Jr</u>	<u>7</u>	
<u>Duke Energy - Sherwood H Smith Jr</u>	<u>8</u>	
<u>Duke Energy - Sherwood H Smith Jr</u>	<u>9</u>	
<u>Duke Energy - Sherwood H Smith Jr</u>	<u>10</u>	
<u>Duke Energy - Sherwood H Smith Jr</u>	<u>ST4</u>	
<u>Duke Energy - Sherwood H Smith Jr</u>	<u>ST5</u>	
<u>Public Works Commission – Butler Warner</u>	<u>1</u>	
<u>Public Works Commission – Butler Warner</u>	<u>2</u>	
<u>Public Works Commission – Butler Warner</u>	<u>3</u>	
<u>Public Works Commission – Butler Warner</u>	<u>6</u>	
<u>Public Works Commission – Butler Warner</u>	<u>7</u>	
<u>Public Works Commission – Butler Warner</u>	<u>8</u>	
<u>Public Works Commission – Butler Warner</u>	<u>9</u>	
<u>Southern Company - Rowan</u>	<u>4</u>	
<u>Southern Company - Rowan</u>	<u>5</u>	
<u>Southern Company - Rowan</u>	<u>STG</u>	

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1 (b) The following work practice standards shall be applied for each BSER measure identified for the affected EGUs:

2 (1) Air heater leakage reduction (ALR), Forced draft fan variable frequency drive (FDF), Induced draft fan  
3 and/or booster fan variable frequency drive (IBD), and Condenser rebundle, retube, rebuild (CRR).

4 (A) Installation shall be performed according to each manufacturer's installation procedures. The  
5 owner or operator shall follow each manufacturer's performance acceptance test procedures,  
6 assure the performance test acceptance criteria are met, and document the acceptance test  
7 results.

8 (B) Ongoing maintenance shall be performed according to each manufacturer's recommended  
9 maintenance procedures at the prescribed frequency levels.

10 (2) Intelligent soot blowing (ISB) and Combustion Optimization and Neural Networks (CO).

11 (A) Installation shall be performed in accordance with each manufacturer's specification and  
12 site-specific design. The owner or operator shall verify performance of each BSER measure  
13 in accordance with each manufacturer's performance acceptance test procedures, assure the  
14 performance acceptance test criteria are met, and document the acceptance test results.

15 (B) Plant personnel responsible for the operation of each BSER measure shall follow procedures  
16 to best utilize the measure per each manufacturer's operating guidelines and to best achieve  
17 the goal of reducing heat rate.

18 (C) Ongoing maintenance shall be performed according to each manufacturer's recommended  
19 maintenance procedures at the prescribed frequency levels.

20 (3) Controllable loss reduction (CLR).

21 (A) The owner or operator shall develop an EGU-specific CLR plan and submit an electronic  
22 copy of the plan to the Director of the Division of Air Quality within one year of the initial  
23 effective date of this rule. This plan shall include the devices and methods for measuring  
24 performance parameters; requirements for the frequency of data collection; method(s) for  
25 collecting and reporting the data; procedures for identifying a loss in EGU efficiency  
26 including any calculations; actions identified to improve EGU heat rate including equipment  
27 optimization or maintenance or changes to EGU operating methods; and a schedule for  
28 implementation of the actions to be taken.

29 (B) The owner or operator shall implement actions identified by the CLR plan within the  
30 timeframe specified by the plan. The owner or operator shall maintain all sensors,  
31 instrumentation, information technology, or other equipment used by the CLR plan in  
32 accordance with the equipment manufacturers' maintenance procedures and schedule.

33 (4) Natural gas combined cycle operation (NGCC).

34 (A) The owner or operator shall operate the NGCC unit, including the combustion turbine and the  
35 associated heat recovery steam generator, using natural gas as fuel during normal operation in  
36 accordance with the manufacturers' recommended procedures.

1 (B) Ongoing maintenance shall be performed according to the manufacturer's recommended  
2 maintenance procedures at the prescribed frequency levels.

3 (c) Alternative BSER. The owner or operator of an affected unit may apply one or more alternative measures that  
4 constitute the best system of emissions reduction for carbon dioxide emissions from coal-fired EGUs on a unit- specific  
5 basis upon approval by the Director by demonstrating to the Director that application of the alternative measures on a  
6 unit-specific basis would achieve an equivalent or greater heat rate improvement than application of the measures  
7 identified in Paragraph (a) of this Rule.

8 (d) Any alternative BSER demonstration shall be submitted no later than six months after the initial effective date of this  
9 Rule and shall include:

- 10 (1) the name and address of the company and the name and telephone number of a company officer over  
11 whose signature the demonstration is submitted;
- 12 (2) a description of all operations conducted at the location to which the demonstration applies and the  
13 purpose that the equipment serves within the operations;
- 14 (3) the type of EGU;
- 15 (4) the remaining useful life of the EGU ;
- 16 (5) the unit's calendar year 2015 baseline data including net heat rate, net generation, annual capacity  
17 factor, and carbon dioxide emissions;
- 18 (6) the unit's projected 2019 capacity factor based on heat input and net generation;
- 19 (7) reference to the specific operational and equipment controls or measures in the Tables in Paragraph (a)  
20 of this Rule for which alternative operational or equipment controls or measures are proposed;
- 21 (8) a description of the proposed alternative operational or equipment controls or measures, the magnitude  
22 of carbon dioxide emission reduction that will be achieved, and the quantity of carbon dioxide that will  
23 be emitted if the alternative operational or equipment controls or measures are instituted;
- 24 (9) whether the proposed measure is adequately demonstrated pursuant to Clean Air Act Section 111(a)(1)  
25 to reduce heat rate;
- 26 (10) the feasibility of applying a specific heat rate improvement measure on a given unit;
- 27 (11) the degree of heat rate reduction potential for a specific feasible heat rate improvement measure;
- 28 (12) a description of any site-specific limitations;
- 29 (13) the associated costs of the proposed alternative equipment or measure including capital, fixed and  
30 variable operational and maintenance (O&M) costs and fuel savings;
- 31 (14) the cost per ton of carbon dioxide emissions reduction;
- 32 (15) any non-air quality health and environmental impact and energy requirements;
- 33 (16) a schedule for the installation or institution of the alternative operational or equipment controls or  
34 measures to achieve compliance by the date specified in Paragraph (g) of this Rule including  
35 increments of progress specified in 40 CFR 60.21(h); and

1           (17) certification in the form of a written statement signed by the responsible official as defined in 15A  
2           NCAC 02Q .0502 that emissions of all other air contaminants from the subject source are in  
3           compliance with all applicable local, state and federal laws and regulations.

4           (18) the company's basis of the alternative control capability to achieve equivalent or greater carbon  
5           dioxide emission reductions than the measure included in Paragraph (a) of this Rule.

6           The demonstration may include a copy of the permit application and need not duplicate information in the permit  
7           application.

8           (e) The Director shall approve a demonstration for alternative control if:

9           (1) The demonstration is submitted in accordance with Paragraph (d) of this Rule;

10          (2) All other air contaminant emissions from the facility are in compliance with, or under a schedule for  
11          compliance with, all applicable local, state, and federal regulations;

12          (3) Based on the Division's technical analysis of the unit-specific information provided under Paragraph  
13          (d) of this Rule, the Director determines that application of the alternative measures on a unit-specific  
14          basis would achieve an equivalent or greater heat rate improvement than application of the measures  
15          identified in Paragraph (a) of this Rule; and

16          (4) The demonstration contains a schedule, including increments of progress specified in 40 CFR 60.21(h),  
17          for the installation or institution of the alternative operational or equipment controls or measures to  
18          achieve the heat rate improvement by the compliance date specified in Paragraph (g) of this Rule.

19          (f) When measures different from those specified in the Tables in Paragraph (a) of this Rule are approved by the  
20          Director, the permit shall contain a condition stating such controls and associated monitoring, recordkeeping, and  
21          reporting requirements to verify implementation of the measures.

22          (g) Compliance schedule. Owners and operators of the affected facilities in Paragraph (b) of this Rule shall implement  
23          the identified BSER measures or alternative BSER approved pursuant to Paragraph (e) of this Rule by September 1,  
24          2019 that were not in place prior to the following date for the corresponding affected utility company(s):

25               (1) July 31, 2015 for all affected EGUs for Duke Energy,

26               (2) August 31, 2015 for all affected EGUs for both Edgecombe Genco - Battleboro and Westmoreland  
27               Partners - Roanoke Valley Energy Facility.

28          (h) All alternative BSER demonstrations, and any modifications or changes to those determinations, approved or  
29          determined by the Division pursuant to Paragraphs (c) through (e) of this Rule shall be submitted by the Division to the  
30          U.S. Environmental Protection Agency (EPA) as a revision to the state plan. No alternative BSER demonstration, nor any  
31          modification or change to a demonstration, approved or determined by the Division pursuant to Paragraphs (c) through  
32          (e) of this Rule shall revise the state plan or be used as a state plan credit, until it is approved by the U.S. EPA as a state  
33          plan revision.

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35          History Note: Authority G.S. 143-215.3(a); 143-215.65; 143-215.66; 143-215.107(a)(5), (10);

36          Amended Eff. September 1, 2016.

1 15A NCAC 02D .2704 is proposed for adoption as follows:  
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3 **15A NCAC 02D .2704 PERMITTING**

4 (a) The owner or operator of any source covered under this Section shall submit permit applications as required  
5 containing heat rate improvement evaluations for each affected unit to comply with the requirements of this Section  
6 following the procedures and requirements in 15A NCAC 02Q .0500 containing Title V permitting procedures for each  
7 affected source. The owner or operator may determine that an alternative BSER measure would achieve an equivalent or  
8 greater heat rate reduction than achieved under the requirements of the BSER measures identified in 15A NCAC 02D  
9 .2703(a). In such a situation the owner or operator shall follow the procedures contained in 15A NCAC 02D .2703(c)  
10 and (d).

11 (b) The Director shall review applications submitted under Paragraph (a) of this Rule and issue permits for compliance  
12 with this Section following the procedures and requirements in 15A NCAC 02Q .0500 (Title V permitting procedures)  
13 for each affected source. In the event that the owner or operator submits a permit application with an alternative BSER  
14 following the procedures contained in 15A NCAC 02D .2703(c) and (d), the Director shall review applications submitted  
15 under Paragraph (a) of this Rule and issue permits for compliance with this Section following the procedures and  
16 requirements contained in 15A NCAC 02D .2703(e).

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18 History Note: Authority G.S. 143-215.3(a); 143-215.107(a)(5), (10); 143-215.108;

19 Amended Eff. September 1, 2016.

1 15A NCAC 02D .2705 is proposed for adoption as follows:  
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3 **15A NCAC 02D .2705 MONITORING, RECORDKEEPING AND REPORTING**

4 (a) For measures implemented under 15A NCAC 02D .2703(a), the following monitoring, recordkeeping and reporting  
5 activities shall be performed for each air heater leakage reduction (ALR), forced draft fan variable frequency drive  
6 (FVD), induced draft fan or booster fan variable frequency drive (IBD) and condenser rebundle, retube, rebuild (CRR):

7 (1) The owner or operator shall record installation activities completed, including the corresponding dates  
8 of completion, maintain the installation records on site, and the records shall be available for review by  
9 the Division of Air Quality. Installation records refers to work orders, invoices, permits, photographs,  
10 engineering drawings or specifications and other documentation routinely developed to install or  
11 modify equipment or otherwise make plant improvements.

12 (2) The owner or operator shall record maintenance activities completed, including the corresponding  
13 dates, maintain the records on site for ten years, and the records shall be available for review by the  
14 Division of Air Quality.

15 (b) For measures implemented under 15A NCAC 02D .2703(a), the following monitoring, recordkeeping and reporting  
16 activities shall be performed for each intelligent soot blowing (ISB) and combustion optimization with neural network  
17 (CO):

18 (1) The owner or operator shall record installation activities completed, including the corresponding dates  
19 of completion, maintain the installation records on site for ten years, and the records shall be available  
20 for review by the Division of Air Quality. Installation records refers to work orders, invoices, permits,  
21 photographs, engineering drawings or specifications and other documentation routinely developed to  
22 install or modify equipment or otherwise make plant improvements.

23 (2) The owner or operator shall monitor and record all operating parameters associated with each BSER  
24 measure required in 15A NCAC 02D .2703(a) and their respective control systems in accordance with  
25 the manufacturer's recommended operating procedures. The owner or operator shall record forced or  
26 operational outages of the BSER measures, the corresponding time period and the reason(s) why. The  
27 owner or operator shall maintain the operating records on site for ten years and the operating records  
28 shall be available for review by the Division of Air Quality.

29 (3) The owner or operator shall record maintenance activities completed, including the corresponding  
30 dates, maintain the records on site for ten years, and the records shall be available for review by the  
31 Division of Air Quality.

32 (c) The following monitoring, recordkeeping and reporting activities shall be performed for controllable loss reduction  
33 (CLR):

34 (1) The owner or operator shall submit an electronic copy of the CLR plan to the Director of the Division  
35 of Air Quality within one year of the initial effective date of this rule.

36 (2) The owner or operator shall monitor and record all parameters defined in the CLR plan in accordance  
37 to the procedures defined in the plan. The owner operator shall maintain electronic records of the data

1 collected and any calculations associated with the CLR plan and the records shall be available for  
2 review by the Division of Air Quality.

3 (3) The owner or operator shall record instances where the CLR plan identified a loss in EGU heat rate  
4 and any actions taken or the rationale and related information as to why action was not taken.

5 (d) The following monitoring, recordkeeping and reporting activities shall be performed for natural gas combined cycle  
6 (NGCC):

7 (1) The owner or operator shall monitor and record all operating parameters associated with NGCC and its  
8 respective control systems in accordance with the manufacturer's recommended operating procedures.

9 The owner or operator shall maintain the operating records on site for ten years and the operating  
10 records shall be available for review by the Division of Air Quality.

11 (2) The owner or operator shall record maintenance activities completed, including the corresponding  
12 dates, maintain the records on site for ten years, and the records shall be available for review by the  
13 Division of Air Quality.

14 (e) In the event that the owner or operator submits a permit application with an alternative BSER following the  
15 procedures contained in 15A NCAC 02D .2703(c) and (d), then the owner or operator shall submit a permit application  
16 that includes monitoring, recordkeeping and reporting activities for the installation, operation and maintenance of the  
17 alternative BSER measure in accordance with the manufacturer's recommended procedures.

18 (f) The owner or operator shall submit an annual compliance report to the Director of the Division of Air Quality each  
19 year starting one year from the initial effective date of this Rule. The annual compliance report shall include:

20 (1) The following parameters on an annual average basis:

21 (A) Carbon dioxide emissions in short tons;

22 (B) Net electrical generation in MWh-net;

23 (C) Heat input in MMBtu;

24 (D) Gross electrical generation in MWh-gross;

25 (E) Calculated heat rate in Btu/kWh-net; and

26 (F) Calculated carbon dioxide emission rate in lb/MWh-net.

27 (2) Activities resulting from compliance with this Rule and the corresponding date(s) including:

28 (A) Installation of equipment related to the BSER measures;

29 (B) Forced or operational outages of equipment lasting longer than ten days related to the BSER  
30 measures, the corresponding time period and the reason(s) why;

31 (C) Instances where operational procedures associated with the BSER measures were not  
32 observed for an period lasting longer than ten days and the reason(s) why; and

33 (D) Instances where a loss in EGU heat rate was identified in the CLR plan and the resulting  
34 actions taken or, the rationale and related information as to why no action was taken.

36 History Note: Authority G.S. 143-215.3(a); 143-215.65; 143-215.66; 143-215.107(a)(5), (10);

37 Amended Eff. September 1, 2016.